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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,396	05/11/2001	Ari Alastalo	460-010309-US(PAR)	6415

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EXAMINER

TRAN, PHUC H

ART UNIT PAPER NUMBER

2666

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,396

Applicant(s)

ALASTALO ET AL.

Examiner

PHUC H TRAN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 17-22, 24, 25, 32-34 and 37-43 is/are rejected.
- 7) ☒ Claim(s) 6-16, 23, 26-31, 35, 36 and 44-48 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/19/01, 9/20/01</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Regarding to claim 25 is indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 17-22, 24, 25, 32-34 and 37-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parish et al. (U.S. Patent No. 5930243) in view of Yun et al. (U.S. Patent No. 6047189).

- With respect to claim 1, 3, 19, 21-22, 24, 33, 37-39, 42, Parish teaches a method for arranging communication between terminals and an access point in a communication system (col. 1, lines 20-25) applying data transmission frames (col. 6, lines 22-30) which comprise at least uplink time slots for performing data transmission from the terminals to the access point, and downlink time slots for performing data transmission from the access point to the terminals via a wireless communication channel, and in which method the terminals allocated can be one or more time slots (Fig. 4) of the frames (col. 6, lines 3-30),

characterized in that in at least part of the frames, at least partly simultaneous time slots are allocated to at least two terminals, wherein in the method, the spatial signature of at least the two terminals (col. 2, lines 3-14) is determined, that in the method, measurements are taken to estimate the timing and frequency offsets and the properties of the communication channel (col. 4, lines 28-33), which measurements are taken at least partly on the basis of a signal transmitted by the terminal to the access point (e.g. communicate in Fig. 1), that during the measurements, the other terminals (MT1-MT4) an communicating with the access point do not transmit a signal to the access point (it is inherently know at one time the access point can communicate with only one terminal therefore the other terminals have to wait for period of time). Parish fails to teach wherein the results of the measurements are used to select the terminals to which simultaneous time slots are to be allocated.

Yun teaches the similar invention and also teach time slots are to be allocated to remote terminals (Fig. 4 and col. 4 lines 46-65). The time slots allocation can be implemented in to Parish's invention for allocating the time slots to remote terminals in the wireless communication for efficiency and better service in the communication.

- With respect to claim 2, Parish teaches characterized in that in the method, simultaneous transmission and/or reception for at least two terminals is implemented on the basis of selection of terminals made on the basis of the measurement results (col. 1, lines 45-49).

- With respect to claim 4, Parish teaches characterized in that the stored signals are used to determine time and frequency offsets of the terminal (col. 5, lines 33-35).

- With respect to claim 5, Parish discloses characterized in that the measurements are used to determine the position of the terminal (col. 10, lines 14-30).

- With respect to claims 17, & 40, Parish teaches characterized in that in the method, the access point uses an array of several antennas and having a variable directional pattern (Fig. 1 show the array of antennas).

- With respect to claims 18, 41, Parish further teaches characterized in that the antenna of the access point used is an array of at least two antennas, that signals are received at the access point by the antennas of the array, and that signals transmitted by a terminal and received via the antennas of the array are used in measurements (col. 4, lines 21-24).

- With respect to claims 20, & 43, Parish also teaches characterized that the timing and frequency offsets of the terminal are measured with at Least two different antennas and that an average is formed of the timing and frequency offsets measured with the different antennas (col. 17, lines 18-22).

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- With respect to claim 32, Parish teaches characterized in that the position of time slots to be used for estimation of terminals to be served simultaneously is selected to be substantially the same as the position of simultaneous uplink and downlink time slots to be allocated to these terminals later on in the data frame (col. 1, lines 36-45).

- With respect to claim 34, Parish teaches characterized in that in the time slot used for estimation, the terminal only transmits a training sequence or an empty packet (col. 5, lines 3-5).

Allowable Subject Matter

6. Claims 6-16, 23,26 27-31, 35-36 and 44-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUC H TRAN whose telephone number is (571) 272-3172. The examiner can normally be reached on M-F (8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RAO SEEMA can be reached on (571)272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuc Tran
Assistant Examiner
Art Unit 2664

P.t
2/5/05


